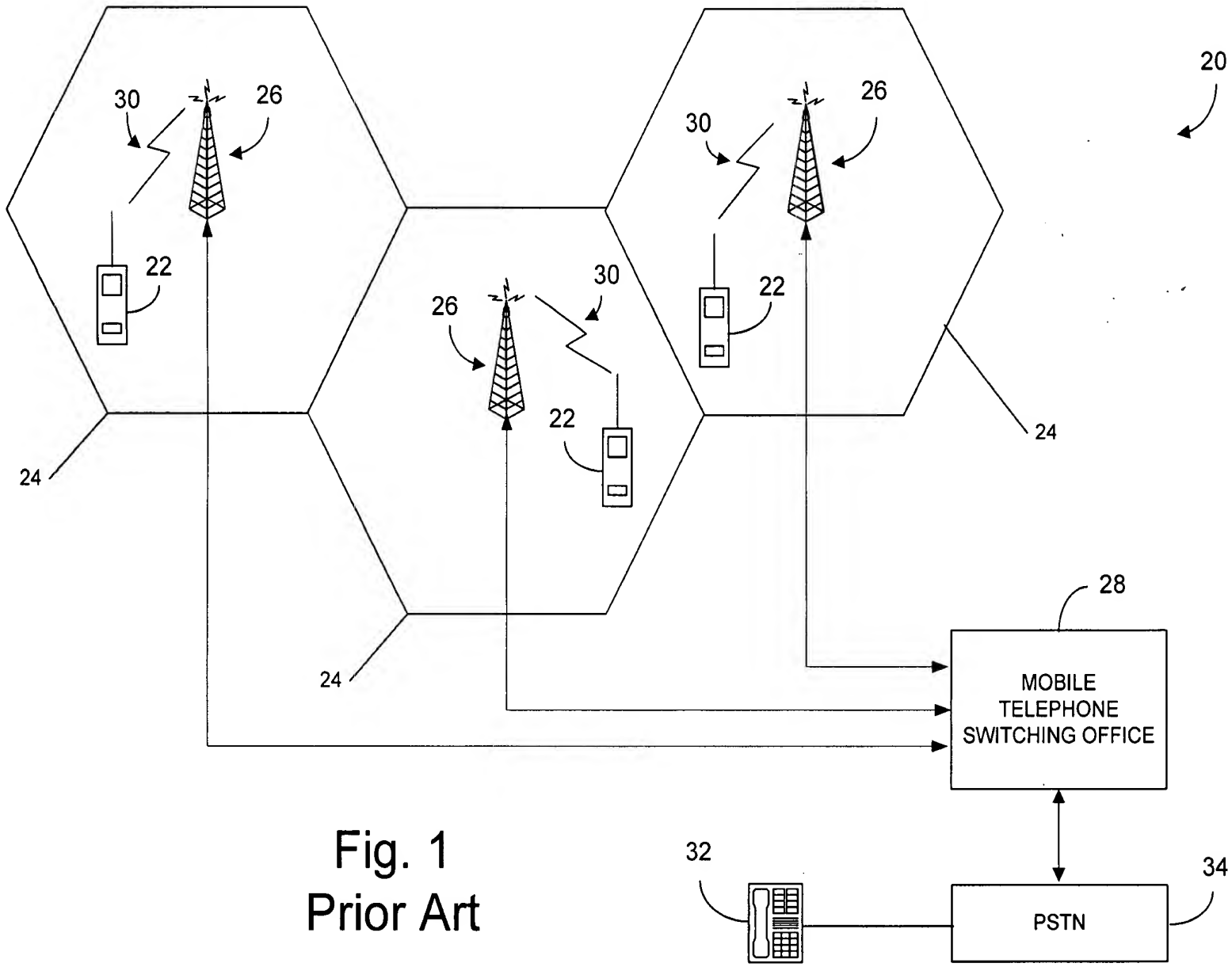

Fig. 1
Prior Art

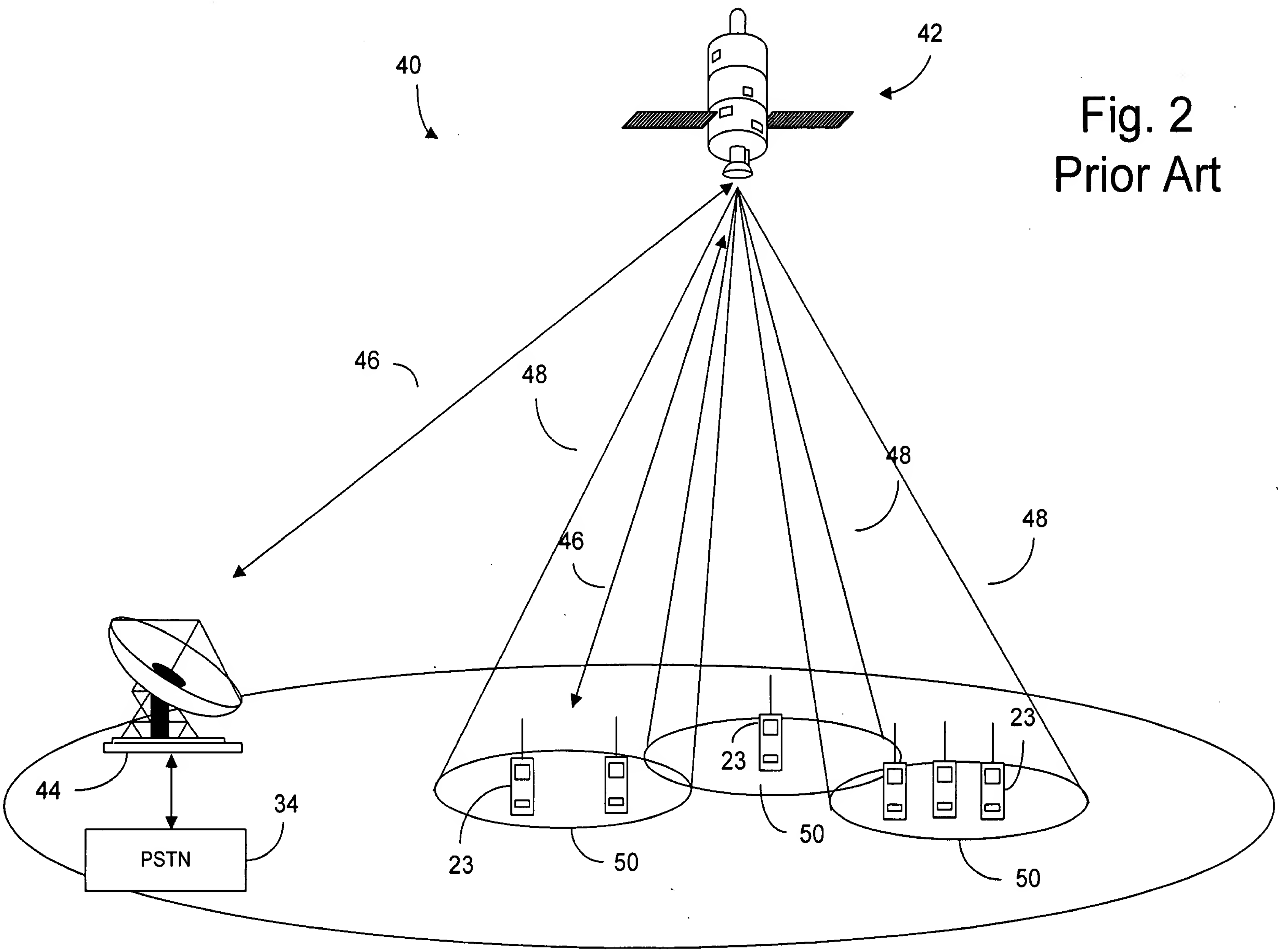

Fig. 2
Prior Art

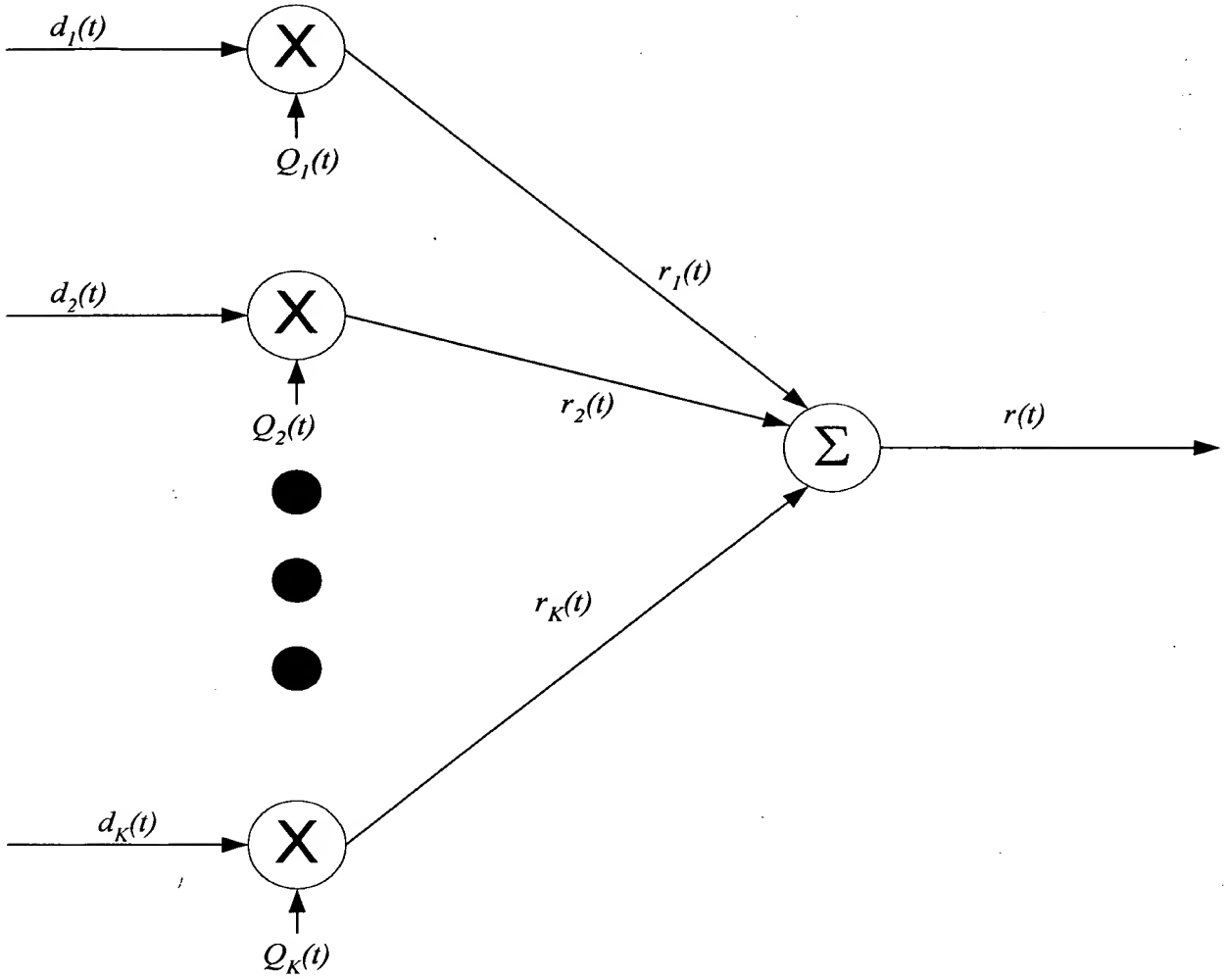

FIG. 3
Prior Art

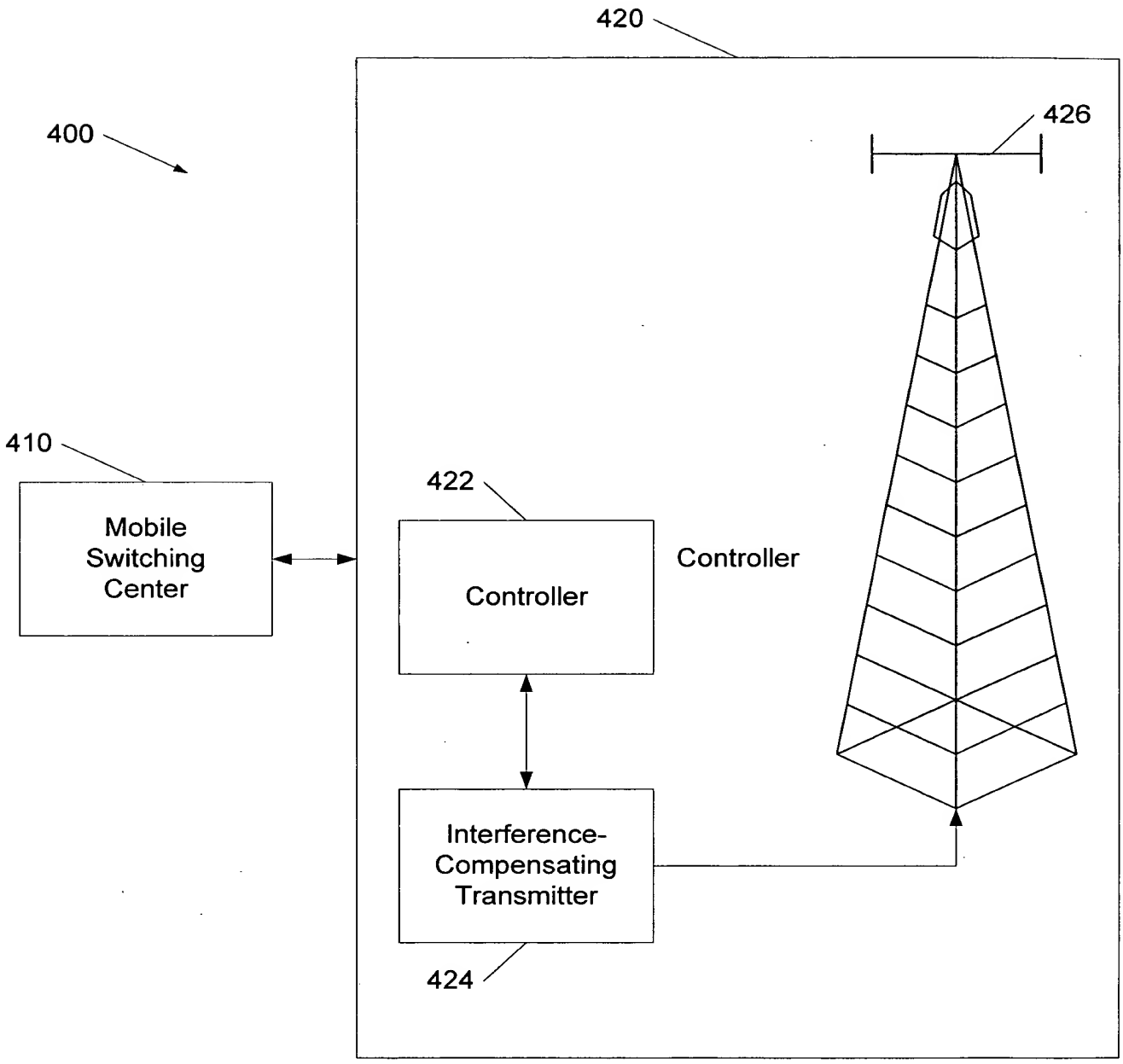
420
400
426
410
Mobile Switching Center
422
Controller
Controller
Interference-Compensating Transmitter
424

FIG. 4

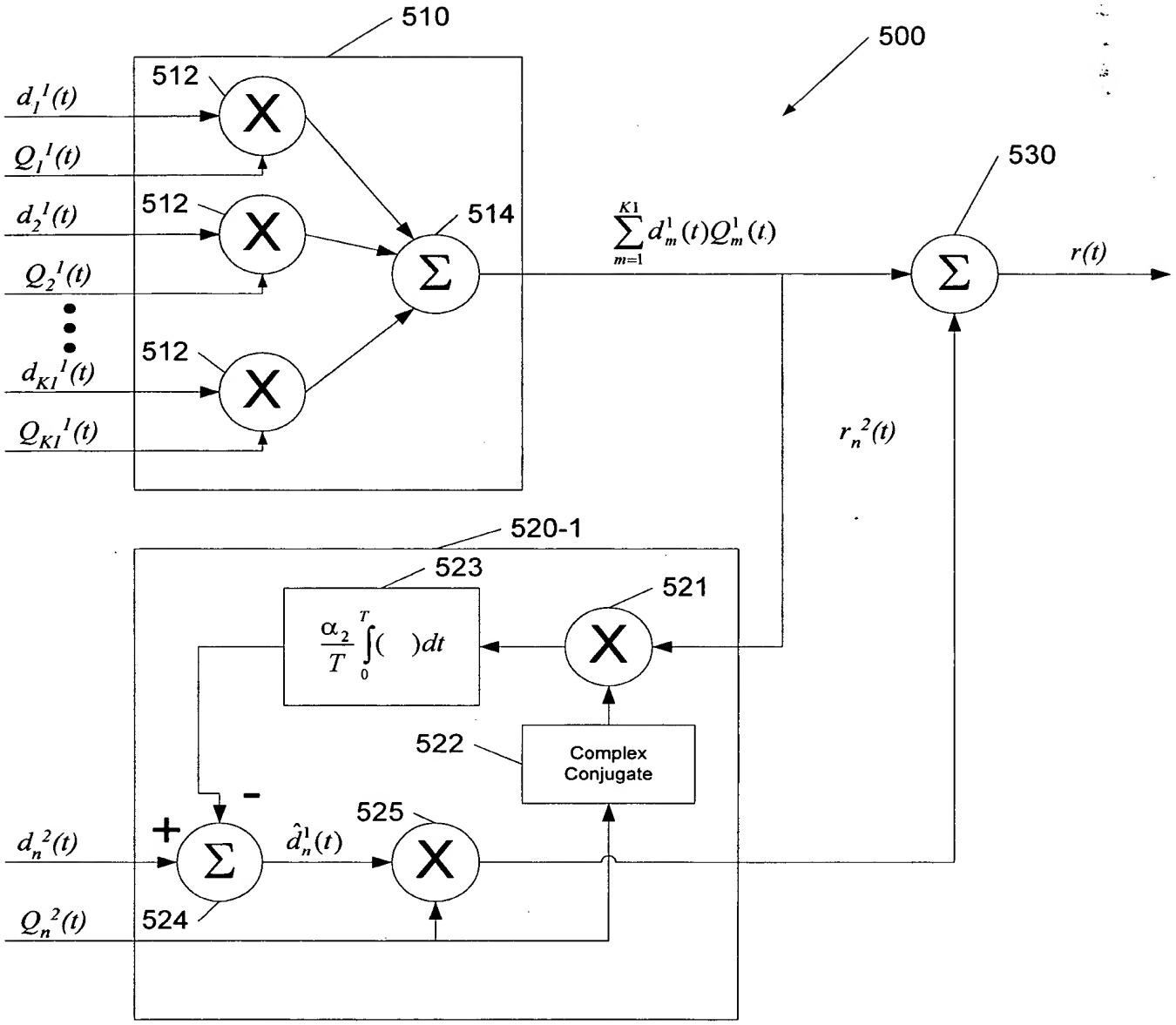
510
500
512
512
512
514
530
$d_1^1(t)$
$Q_1^1(t)$
$d_2^1(t)$
$Q_2^1(t)$
$d_{K1}^1(t)$
$Q_{K1}^1(t)$
$\sum_{m=1}^{K1} d_m^1(t)Q_m^1(t)$
$r(t)$
$r_n^2(t)$
520-1
523
521
$\frac{\alpha_2}{T}\int_0^T(\quad)dt$
522
Complex Conjugate
525
$d_n^2(t)$
$\hat{d}_n^1(t)$
$Q_n^2(t)$
524

FIG. 5

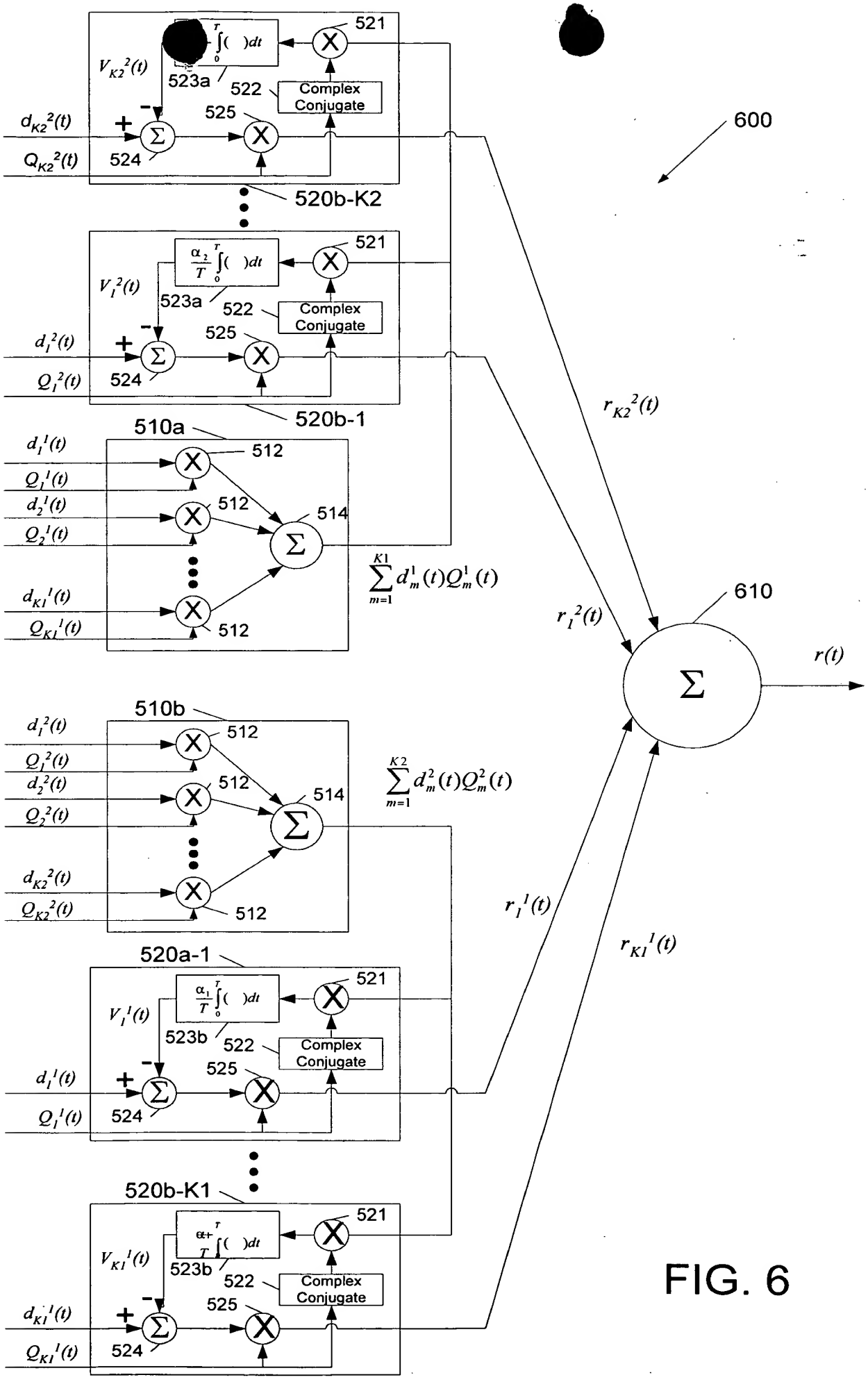
600
610
520b-K2
520b-1
520a-1
520b-K1
510a
510b
521
522
523a
523b
524
525
512
514
Complex Conjugate
$V_{K2}^2(t)$
$V_1^2(t)$
$V_1^1(t)$
$V_{K1}^1(t)$
$d_{K2}^2(t)$
$Q_{K2}^2(t)$
$d_1^2(t)$
$Q_1^2(t)$
$d_1^1(t)$
$Q_1^1(t)$
$d_2^1(t)$
$Q_2^1(t)$
$d_{K1}^1(t)$
$Q_{K1}^1(t)$
$d_1^2(t)$
$Q_1^2(t)$
$d_2^2(t)$
$Q_2^2(t)$
$d_{K2}^2(t)$
$Q_{K2}^2(t)$
$d_1^1(t)$
$Q_1^1(t)$
$d_{K1}^1(t)$
$Q_{K1}^1(t)$
$\sum_{m=1}^{K1} d_m^1(t)Q_m^1(t)$
$\sum_{m=1}^{K2} d_m^2(t)Q_m^2(t)$
$r_{K2}^2(t)$
$r_1^2(t)$
$r_1^1(t)$
$r_{K1}^1(t)$
$r(t)$

FIG. 6

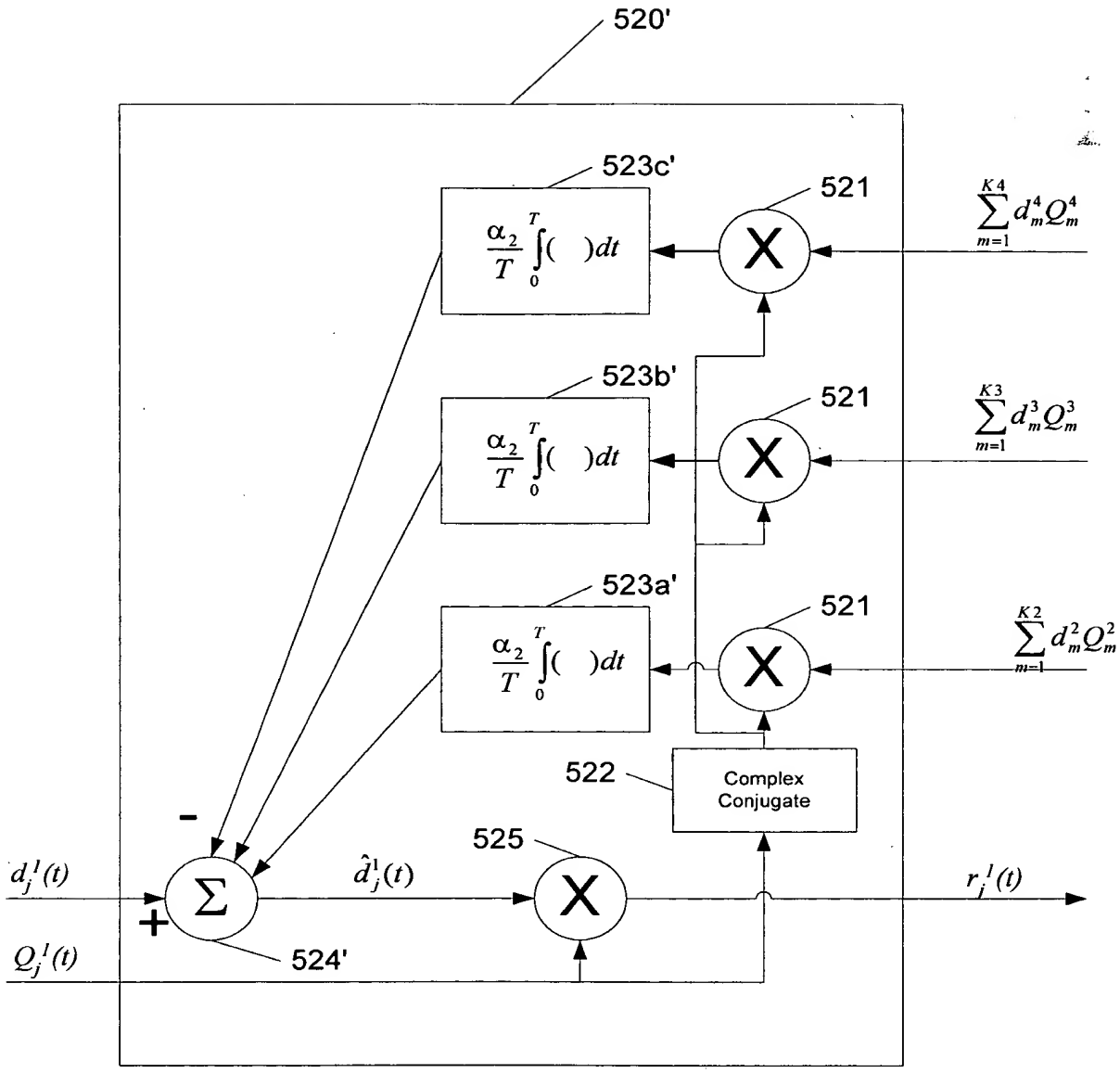
520'
523c'
521
$\frac{\alpha_2}{T}\int_0^T(\ )dt$
$\sum_{m=1}^{K4} d_m^4 Q_m^4$
523b'
521
$\frac{\alpha_2}{T}\int_0^T(\ )dt$
$\sum_{m=1}^{K3} d_m^3 Q_m^3$
523a'
521
$\frac{\alpha_2}{T}\int_0^T(\ )dt$
$\sum_{m=1}^{K2} d_m^2 Q_m^2$
522
Complex Conjugate
525
$d_j^1(t)$
$\hat{d}_j^1(t)$
$r_j^1(t)$
$Q_j^1(t)$
524'

FIG. 7

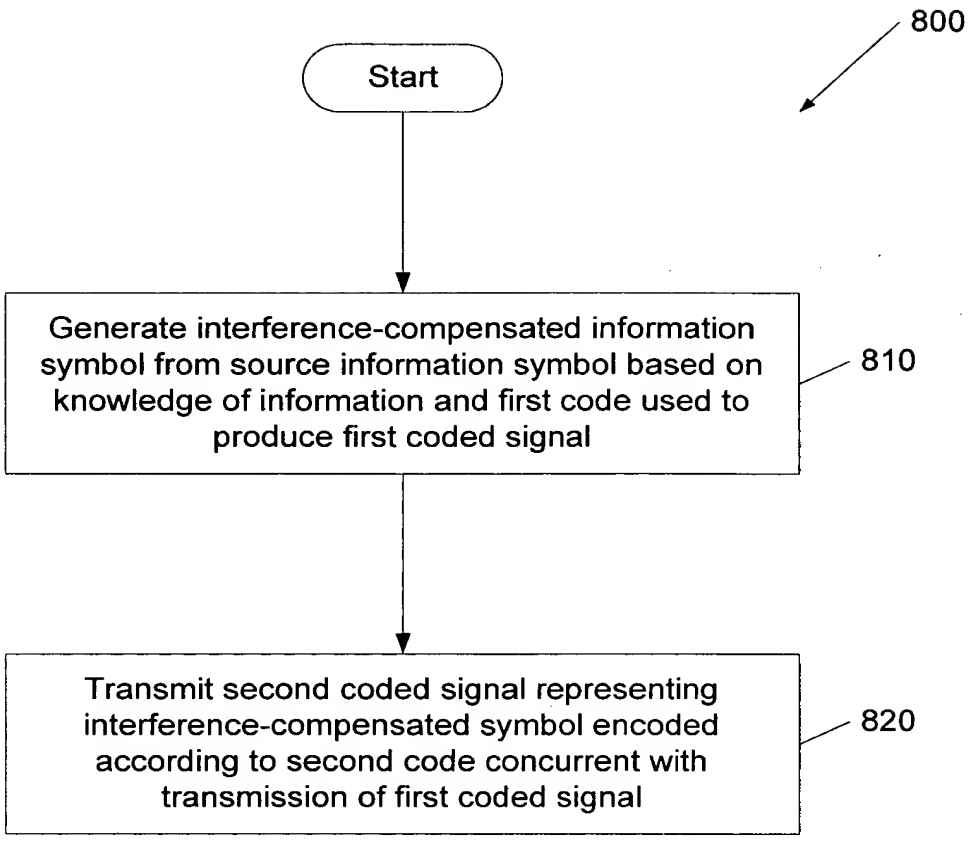
800
Start
Generate interference-compensated information symbol from source information symbol based on knowledge of information and first code used to produce first coded signal
810
Transmit second coded signal representing interference-compensated symbol encoded according to second code concurrent with transmission of first coded signal
820

FIG. 8

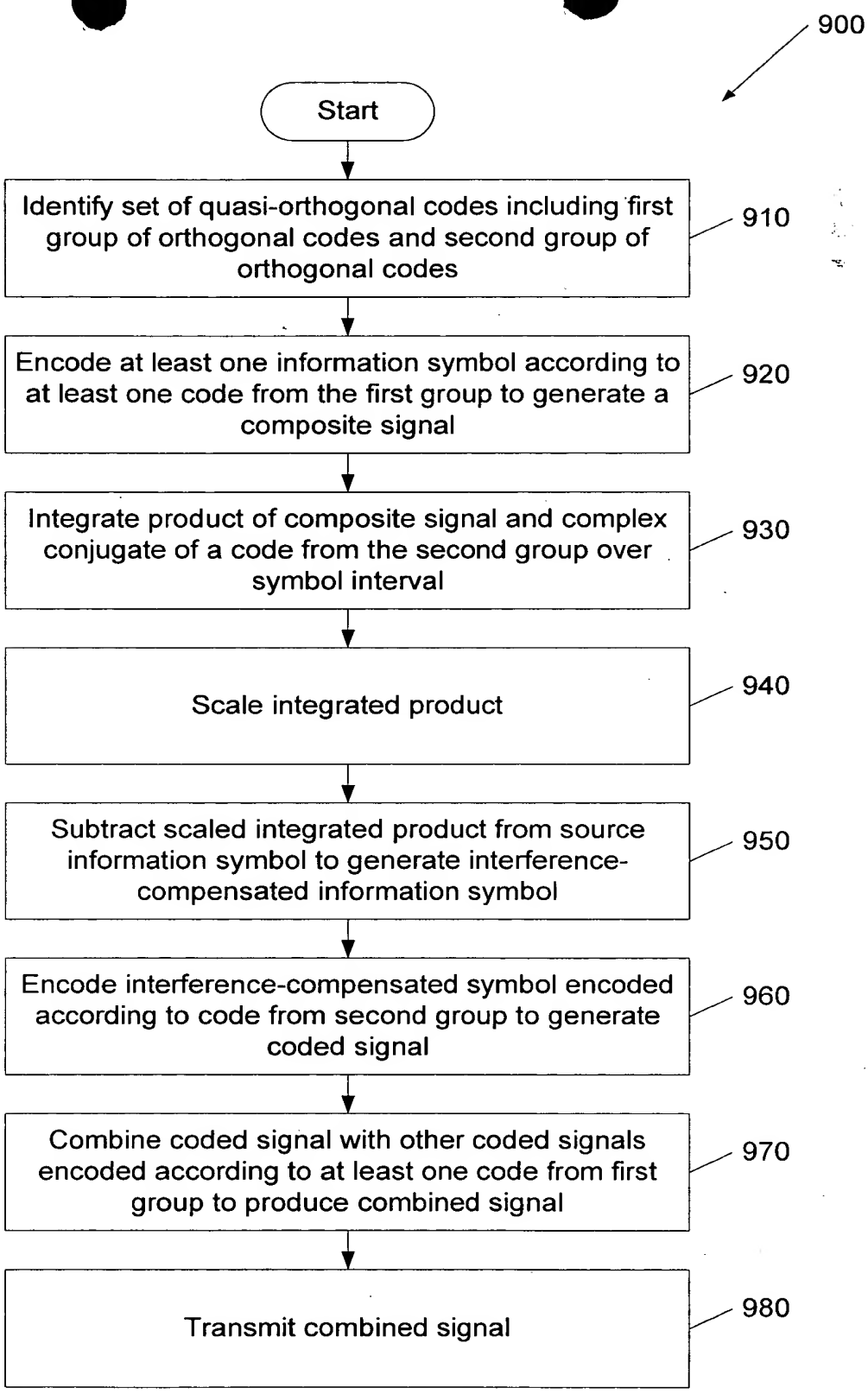
900
Start
Identify set of quasi-orthogonal codes including first group of orthogonal codes and second group of orthogonal codes
910
Encode at least one information symbol according to at least one code from the first group to generate a composite signal
920
Integrate product of composite signal and complex conjugate of a code from the second group over symbol interval
930
Scale integrated product
940
Subtract scaled integrated product from source information symbol to generate interference-compensated information symbol
950
Encode interference-compensated symbol encoded according to code from second group to generate coded signal
960
Combine coded signal with other coded signals encoded according to at least one code from first group to produce combined signal
970
Transmit combined signal
980

FIG. 9

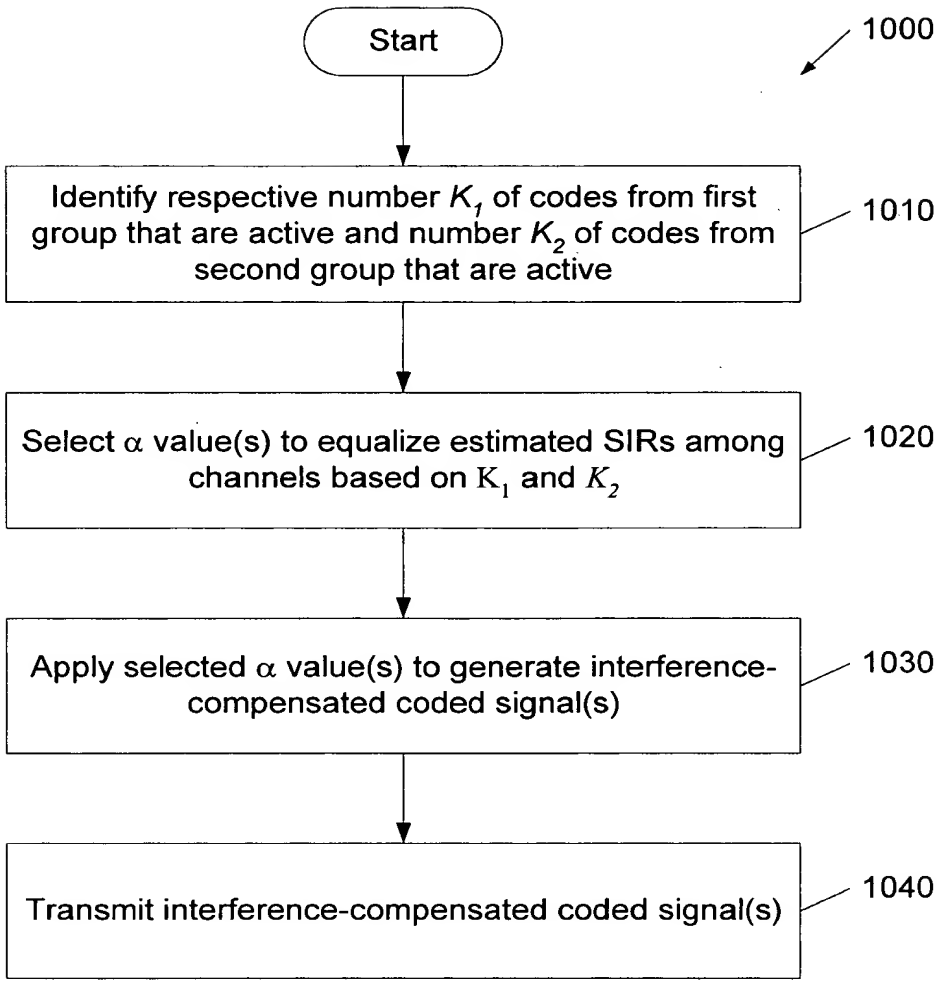
Start
1000
Identify respective number K_1 of codes from first group that are active and number K_2 of codes from second group that are active
1010
Select α value(s) to equalize estimated SIRs among channels based on K_1 and K_2
1020
Apply selected α value(s) to generate interference-compensated coded signal(s)
1030
Transmit interference-compensated coded signal(s)
1040

FIG. 10